

Patent claims

1. Headlight for a vehicle, having a reflector, a light source in the area of the focal point of the reflector, and a transparent lens,  
characterized

in that the light source represents a semiconductor light source which emits infrared radiation, and in that a cooling element is provided, is thermally connected to the light source, extends from the light source to the lens and projects into the lens or passes through it.

2. Headlight according to Claim 1,  
characterized

in that the cooling element extends along the centre axis of the reflector.

3. Headlight according to Claim 1 or 2,  
characterized

in that the cooling element has an element in the form of a rod.

4. Headlight according to one of Claims 1 to 3,  
characterized

in that the cooling element has one or more essentially flat elements.

5. Headlight according to Claim 4,  
characterized

in that one or more flat elements are arranged running radially from the centre axis.

6. Headlight according to Claim 5,  
characterized

in that two or more radially running flat elements are provided, and are arranged rotationally symmetrically about the centre axis.

7. Headlight according to Claim 5,  
characterized

in that 3, 4 or 5 radially running flat elements are provided and are arranged in the form of a star.

8. Headlight according to one of the preceding claims,  
characterized

in that the cooling element is designed to be partially or completely mirrored.

9. Headlight according to one of the preceding claims,  
characterized

in that the cooling element is composed of metal, in particular aluminium, copper, silver, iron or an alloy using such metals.

10. Headlight according to one of the preceding claims,  
characterized

in that the cooling element is sealed from the lens by means of an elastic, in particular permanently elastic, sealing agent, in particular composed of silicone rubber.

11. Headlight according to one of the preceding claims,  
characterized

in that the cooling element is not the same colour as the reflector.

12. Headlight according to one of the preceding claims,  
characterized

in that the cooling element does not project, or projects only insignificantly, beyond the lens.

13. Headlight according to Claim 12,  
characterized

in that a flat heat sink, in particular in the form of a disc,  
is arranged on the side of the lens which faces away from the  
light source and is thermally connected to the cooling element.

14. Headlight according to one of the preceding claims,  
characterized

in that the light source represents an array comprising two or  
more individual light sources, which is arranged on a mount and  
whose mount is thermally conductively connected to the cooling  
element.

15. Headlight according to one of the preceding Claims 4 to 13,  
characterized

in that two or more flat elements are mechanically connected to  
the reflector.

16. Headlight according to one of the preceding claims,  
characterized

in that the power supply for the light source is provided via  
the cooling element.